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ABSTRACT

The effects of level of interpersonal attraction (or friendship) on young children's language production were examined during a 15-minute play episode, in which 40 pairs of 3-5 year-olds were separated and then reunited. Friendship was measured by a picture sociometric test validated against free play choices. Language measures focused on structure (MLU, number of utterances, and pause length) and contents using a modified form of the Gottman and Parkhurst coding system. Both aspects of linguistic production were affected by friendship and by stage of play episode (initial five minutes, separation, reunion). In general, separation dampened language, particularly those aspects, such as questions, most dependent upon partner presence, while reunion stimulated language production above baseline levels. Friendship interactions showed that children with friends initially engaged in more fantasy play and paused longer between utterances than when with non-friends. Only with friends did fantasy play decline during separation and exceed baseline levels during reunion. In addition, for this group, number of utterances increased during reunion. (Author/MP)

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PEER RELATIONS AND CHILDREN'S LANGUAGE: EFFECTS OF BRIEF SEPARATIONS

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Abstract

The effects of level of interpersonal attraction (or friendship) on young children's language production were examined during a 15-minute play episode, in which 40 pairs of 3-5 year olds were separated and then reunited. Friendship was measured by a picture sociometric test validated against free play choices. Language measures focussed on structure (MLU, number of utterances, and pause length) and contents using a modified form of the Gottmann and Parkhurst coding system. Both aspects of linguistic production were affected by friendship and by stage of play episode (initial five minutes, separation, reunion). In general, separation dampened language, particularly those aspects, such as questions, most dependent upon partner presence, while reunion stimulated language production above baseline levels. Interactions with friendship showed that children with friends initially engaged in more fantasy, pausing longer between utterances than when with non-friends. Only with friends did fantasy decline during separation and exceed baseline levels during reunion, with number of utterances also increasing more sharply. The generally strong affective impact of brief peer separations and reunions was accentuated for children with friends particularly in the area of fantasy play.

Peer Relations and Children's Language: Effects of Brief Separations

Piaget's view of language acquisition has been conceptualized (Edmonds, 1978) in terms of a number of interrelated systems: a) the self, b) what is known, c) others, to whom knowledge is expressed and d) symbols, means of communicating knowledge. In describing the relations between self, others and the strategies of symbol selection, Piaget posited that the demands of peer play force the child to decenter language use, while the compensatory linguistic behavior of most adults presents no such challenge. While research has amply documented the sensitivity of young children to gross variations in the characteristics of their listeners, such as age (Shatz & Gelman, 1973) it is unclear just what characteristics of the peer relationship have linguistic significance for the child. Moreover, person characteristics have been conceived as static attributes of the listener rather than changing properties of the relationship, "the fruit of a mutual engagement" (Piaget, 1932, p. 88). The purpose of this study was to determine how characteristics of peers in the context of a changing relationship, affect the young child's language use.

Previous work by the author (Cohen & Melson, in press) suggested that level of interpersonal attraction, or friendship, constituted a peer characteristic of importance. Despite current emphasis on the role of peers in social development, little is known concerning the quality of the young child's relationship with them. Cohen and Van Tassell (1978) have shown that stable friendship

choices are made by preschool-aged children. Other studies indicate that friends dispense more positive reinforcements to each other than do non-friends (Hartup & Coates, 1967). Yet, Cohen and Nelson found that children are more verbally responsive to non-friends who appear to constitute more novel stimuli than friends. Thus, paucity of research and conflicting findings make it unclear how friendship is related to other aspects of the child's social interactions with peers. In order to simulate naturally occuring play episodes, pairs of children varying in interpersonal attraction for one another, were each observed for 15 minutes in a laboratory playroom, during which time they were separated by an adult and then reunited. We were primarily interested in how the changing nature of peer play interacted with relationship quality to affect both structural and functional components of language.

Peer separation and reunion were selected as the context of interest partially because of the great attention paid in the maternal-child literature to separation and reunion as events potentially disruptive to a close interpersonal relationship (cf. Ainsworth, 1973). A social network framework (Lewis & Feiring, 1979) emphasizes the ties children form with a variety of social objects and hence, the need for comparative analysis of their responses to the many individuals to whom they may form attachments.

In addition, separation and reunion from playmates is interesting in its own right as the subject of study. Brief separations from peers have never been studied systematically. Ancedotal accounts of peer attachments among kibbutz children (Spiro, 1975) who are reared communally with agemates often mention the distress of children as young as one

year of age when confronted with the unexpected absence of a favorite "crib-mate." In urban America, regular interactions with peers normally do not begin before age three, when some children begin attending preschools, day care centers, or play groups and others begin to socialize with playmates in less structured ways. With such regular interactions, friendships among peers develop. Within the context of such friendships, the child confronts brief separations from playmates as a frequent occurrence. A friend must go home unexpectedly; a teacher needs one child and so separates a pair engrossed in play; a father appears early at school to take his child to a dental appointment. These examples share the following characteristics: (1) they are involuntary, (2) they are initiated by an adult, (3) they are relatively brief, lasting from several minutes to several hours and may be contrasted to long-term separations of several months or years.

Method

Subjects

Eighty-one children from four preschool classrooms formed the initial subject pool. Based on results of a sociometric test, the final sample for this study consisted of 6 three-year-olds (4 boys and 2 girls), 12 four-year-olds (5 boys and 7 girls), and 22 five-year-olds (13 boys and 9 girls).

Procedures

Sociometric measurement. A paired-comparisons sociometric test (Cohen & Van Tassel, 1978) was used in which children were shown pairs of color photographs of their classmates and asked with which child in each pair they would like to play inside their classrooms. Since presenting each child with all possible pairs within his or her class would result in an unacceptably long test, five random groups of 38 paired

comparisons each were constructed. Administration of three randomly chosen sublists, each 5-7 minutes in duration, yielded a test-retest correlation of .42 after 3 months compared with .50 for the complete list administered to a comparison group. The measure had been validated by comparison with observed free play choices in the classroom. Level of friendship one child felt for another child was computed as the percentage of times the first child chose the second child's photograph.

Friendships were defined for pairs of children who selected each other at least 55 percent of the time they saw the other's photograph ($\underline{M}$ = 66%); non-friendships for pairs who selected each other less than 45 percent ($\underline{M}$ = 35%). We selected children who showed a strong mutual attraction and re-paired them with children to whom they showed strong "non-attraction". Twenty high-friendship dyads were formed (8 boy-boy dyads, 7 girl-girl dyads, and 5 mixed-sex dyads). The 20 low-friendship dyads consisted of four boy-boy pairs, two girl-girl pairs, and 14 mixed-sex pairs.

Separation experience. The dyads were randomly assigned to separation treatments (being taken out with adult vs. left behind). Each child was only observed once in a separation condition, in such a way that half of the children with friends and half with non-friends, were left behind. Each pair was videotaped while playing in a 3.6 m x 3.6 m laboratory playroom equipped with a variety of toys for 5 minutes after which an adult removed one of the children while the other was observed alone for 5 minutes. A 5-minute reunion period followed. Data were analyzed by coders blind to friendship condition and nature of the experiment, using both transcript and video records.

Language measures. Two major analyses were made of the transcript records. The first analysis focussed on structural components of language: number of utterances, mean length of utterances (MLU), and mean duration of pauses between utterances. A second analysis modified the coding system of Gottmann & Parkhurst (1977) to characterize speech contents in terms of the following categories: Fantasy, Joke, Question, Squabble, Demand, Reference to oneself, Statements of feeling, Offers, Asks help, Information Exchange, Agrees and accepts, Disagreement, Rules, Clarifies message, Mind-Reading, and You and Me (see Table 1 for definitions).

Insert Table 1 here

This coding system measures "thought units", that is, strings of words, phrases, or single words with a single expressive function. Usually the divisions come where there is (in the transcripts) or could be a comma or a period. In coding, voice tone and context are important in determining the function of a group of words. Therefore, coding was always done using both transcript and videotape records.

Two coders worked together and discussed disagreements. Reliability was computed in two ways: percentage of agreement between the team's codes of the same material at two different points in time and percentage of agreement between team members working individually on unfamiliar material after an initial period of training. Agreement was somewhat higher using the former method. Overall, percentage of agreement based on 10% of the transcripts and tapes ranged from 62% to 93% (median percentage = 71%).

Results

Since sex composition of the dyad and friendship status were confounded, a preliminary analysis of covariance determined that the latter factor contributed independent effects. The data were analyzed with a

friendship status (high vs. low) x separation phase (pre-, during, post-separation) repeated measures ANOVA. As Table 2 indicates, separation main effects were obtained on most measures. In general, children

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Insert Table 2 here

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separated unexpectedly from a playmate spoke less, paused longer and produced shorter utterances. Specific changes in the nature of these utterances also occurred. The more interactive content categories, such as Question, Information exchange, Agrees, Clarifies message and You and me, all declined, while categories more compatible with solitary speech -- Fantasy, Reference to self, and Feeling -- did not change. An exception was Demand; children made more demand statements when alone than previously.

The effects of reunion not only reversed those of separation but usually exceeded baseline levels. In particular, content categories most dependent on interaction - Question, Information exchange, Clarifies message, Mindreading - increased dramatically.

These main effects were qualified somewhat by a number of interactions with friendship level. Friendship x separation phase interactions were obtained on the following structural aspects of speech: number of utterances ($F(2, 80) = 8.07$, $p < .01$) and mean length of pauses ($F\ 2, 80) = 6.13$, $p < .05$). While children with friends vs. non-friends did not differ in initial utterance production ($M = 36.8$ vs. 39.2), friends produced significantly more utterances than did non-friends ($M = 49.7$ vs. 39.3) during reunion. Pause length differentiated the speech of children with friends vs. non-friends only during the initial 5-minute pre-separation phase ($M = 3.2$ seconds (friends) vs. 2.2 seconds (non-friends)).

A similiar analysis of speech contents showed that children with friends used more fantasy ($F\ 2,80) = 5.15$, $p < .05$), and jokes, ($F\ 2,80) = 5.76$, $p < .05$)

than non-friends during the first phase. Only with friends did children decrease their use of these language categories when separated and increase them when reunited.

Discussion

The results support the conclusion that interpersonal attraction in the context of peer separation and reunion is an important determinant of language production during peer play. While friends did not differ from non-friends at the outset in MLU's or number of utterances, they used more fantasy language. Their longer pause length between utterances may have been used to help prepare these utterances. We are currently testing this hypothesis by examining the probability of eye gaze toward vs. away from the interactant during and just prior to a fantasy or joke construction. Preliminary results on an incomplete corpus of transcripts suggest that children are more likely to look away from their playmate during the pause just before a relatively complex utterance than before a simpler one.

These linguistic differences between children with friends and non-friends were markedly affected by separation and reunion. When children were reunited with friends vs. non-friends they spoke more rapidly, pausing for shorter intervals between utterances. When separated from a friend vs. non-friend, a child was less likely to continue fantasy verbalizations, but was more likely to do so when the interaction was re-established.

In summary, children's language changed both quantitatively and qualitatively when playing with a friend vs. non-friend. Because we observed play with toys that might stimulate fantasy (e.g., telephones, hats, tea set, trucks) it is not surprising that fantasy language was most sensitive to changes of partner. In a task situation, it is possible that differences in such categories as Information exchange, Question, and Clarifies message might be obtained.

While linguistic adjustment to relationship quality did exist, separation and reunion with a peer had generally wide-ranging and consistent effects for the children studied. Separation clearly dampened language, particularly speech most dependent upon an interactant. An interesting finding, however, was the increase in Demands during separation and decrease during reunion. Inspection of the videotapes indicated that when alone, children made more self-directed demands than previously. By doing so, they appeared to be providing themselves with an interactant in order to continue cooperative play sequences. For example, note John's solitary speech during separation: "Do you want to play trucks? OK."

Reunion, by contrast, was a period of heightened excitement in pairs, with most language indices exceeding baseline levels. The most dramatic increases were obtained for categories indexing positive interpersonal feeling (Agrees) or play involvement (Information exchange, Mindreading, Question), as well as References to self. It is clear from this study that peer separation and reunion have strong affective impact on preschool children.

Peers are important regulators and stimulators of linguistic and social development, but the nature of their role is affected by both relationship quality (attraction) and its process nature. In particular, brief separations and reunions from both friends and non-friends dramatically affect both structural and qualitative aspects of language.

Table 1

Language Code Definitions*

Code Name	Brief Definition
Fantasy	Child is pretending to be someone else or is talking inside the framework of a fantasy or "make believe" that has been proposed by one or both of the children.
Question	Self-explanatory
Joke	Whenever any utterance is accompanied by laughter, silliness or joking.
Squabble	Angry, annoyed, disgusted or aggressive behavior, includes insults, yelling, whining, sarcasm, and retaliation or tattling.
Demand	When speaker demands attention or a response, includes commands.
Reference to self	When speaker is talking about him- or herself.
Feeling	Statements that have to do with speaker's wants, feelings, opinion, likes, dislikes and needs.
Mindreading	When feeling, motive, attitude, personality trait, experience, opinion is attributed to the other person, without an inference being made (Ex.: "You hate Jason").
Offers	Helpfulness, thoughtfulness and generosity.
Asks help	Self-explanatory
You and me	Where speaker is working for closeness or unity between himself and the other by emphasizing cooperation, common interest, common experience, concerted action or shared experiences from which others are shut out.
Rule	When a rule or principle for behaving or proceeding is either implied or invoked or created.
Information exchange	Whenever simple information is asked for or given.
Clarifies message	If speaker asks to have something made clear or else tried to adjust what he is saying in such a way as to avoid or clear up any confusion.

*Adapted from Gottman and Parkhurst (1977)

Table 1 (continued)

Code Name	Brief Definition
Agreement and acceptance	Statements having to do with agreement, compliance or pleasure with the other or what he or she does has or wants.
Disagreement and nonacceptance	For non-cooperation or negativity directed at the other or the other's statements, possessions or behavior.

Table 2

Characteristics of Language Production
Before, During, and After Peer Separation (n = 40)

Pre-separation		Separation	Reunion	F
Mean number of utterances	3.7	13.5	47.5	8.73**
Mean length pauses (in seconds)	2.5	21.	3.5	10.02**
Mean length utterances	4.0	2.3	5.0	5.12*
Fantasy	11.1	10.2	14.7	4.98*
Question	4.9	1.3	7.3	5.62*
Jokes	1.5	0	.3	ns
Squabble	-	-	-	-
Demand	6.0	8.8	2.6	6.73*
Reference to self	5.2	6.5	18.3	9.62**
Feeling	3.3	2.3	3.6	ns
Mindreading	1.4	-	8.7	7.43*
Offers	.9	-	1.1	ns
Asks help	-	-	-	
You and me	3.0	.1	2.8	ns
Rules	-	-	-	-
Information exchange	10.3	3.9	13.7	6.23*
Clarifies message	2.4	.4	3.4	5.12*
Agrees	4.2	1.1	17.0	8.74**
Disagrees	-	-	-	-

*p <.05

**p <.01

- too low frequency for analysis

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